

Second Periodic Review Priceless Gas

1110 Morgan Street, Davenport, Lincoln County Facility Site ID 36318758, Cleanup Site ID 5945

Toxics Cleanup Program, Eastern Region

Washington State Department of Ecology Spokane, Washington

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Document Information

This document is available on the Department of Ecology's Priceless Gas cleanup site page.¹

Related Information

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- Cleanup site ID: 5945

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¹ https://apps.ecology.wa.gov/cleanupsearch/site/5945

² https://ecology.wa.gov/About-us/Who-we-are/Our-Programs/Toxics-Cleanup

³ https://ecology.wa.gov/About-us/Accountability-transparency/Our-website/Accessibility

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Introduction

The Washington State Department of Ecology (Ecology) reviewed post-cleanup site conditions and monitoring data to ensure human health and the environment are being protected at the Priceless Gas cleanup site (Site). Site cleanup was implemented under the Model Toxics Control Act (MTCA) regulations, Chapter 173-340 Washington Administrative Code (WAC). This is the second periodic review conducted for this Site. Ecology completed the first periodic review in January 2016.

Cleanup activities at this Site were completed under an enforcement order. Residual concentrations of petroleum hydrocarbons that exceeded MTCA cleanup levels remain on the property. The MTCA cleanup levels for soil and groundwater are established under <u>WAC 173-340-740</u>⁴ and <u>WAC 173-340-720</u>,⁵ respectively.

Ecology determined institutional controls in the form of a restrictive covenant would be required as part of the cleanup action for the Site. <u>WAC 173-340-420(2)</u>⁶ requires Ecology to conduct a periodic review of a site every five years.

For this Site, a periodic review is required because the department approved a cleanup action under an order.

When evaluating whether human health and the environment are being protected, Ecology must consider the following factors (WAC 173-340-420(4)):

- The effectiveness of ongoing or completed cleanup actions, including the effectiveness of engineered controls and institutional controls in limiting exposure to hazardous substances remaining at the site
- b) New scientific information for individual hazardous substances or mixtures present at the site
- c) New applicable state and federal laws for hazardous substances present at the site
- d) Current and projected site and resource uses
- e) The availability and practicability of more permanent remedies
- f) The availability of improved analytical techniques to evaluate compliance with cleanup levels

Ecology publishes a notice of all periodic reviews in the *Site Register* and provides an opportunity for public comment.

⁴ https://app.leg.wa.gov/WAC/default.aspx?cite=173-340-740

⁵ https://app.leg.wa.gov/WAC/default.aspx?cite=173-340-720

⁶ https://app.leg.wa.gov/wac/default.aspx?cite=173-340-420

Summary of Site Conditions

Site description and history

The Priceless Gas Site is currently used by Some Like it Hot Espresso, a drive-up retail coffee shop.

The Site was previously used as a retail service station and convenience store by Merit Truck Stop, Inc. (Merit) / F.O.F. Inc. This facility used four underground storage tanks (USTs): one 12,000-gallon tank, one 10,000-gallon tank, and two 2,000-gallon tanks. Gasoline and diesel were stored at various times in all the tanks. All four tanks were emptied, and Priceless Gas retail operations were discontinued in March 1997. This facility was closed in June 1998.

The site is mostly paved with asphalt. The surrounding properties are commercial and residential. Groundwater flow direction is generally north-northeast toward Cottonwood Creek. A vicinity map is in Appendix A, and a Site plan is in Appendix B.

Site investigations

In November 1998, Ecology received a call from a resident, Bruce Dehn, whose home is directly north of Priceless Gas. Mr. Dehn was concerned about an apparent gasoline odor in his home and apparent gasoline product seeping through the wall in his basement. Ecology's Emergency Spill Response Team responded to Mr. Dehn's call for the initial investigation.

Three test pits were excavated on the Site and on the southern portion of the Dehn property in November 1998. Petroleum-contaminated soil (PCS) was identified in two of the three test pits. Shallow basalt bedrock was encountered in each test pit, and basalt across the Site is encountered near the surface to approximately 12 feet below ground surface. It was determined that the petroleum was infiltrating the fractured bedrock approximately 10 – 12 feet north of the Dehn property line. Two monitoring wells (MW-1 and MW-2) were installed near the southern edge of the Dehn property, and groundwater samples were collected from these wells in December 1998. The samples indicated elevated gasoline-range petroleum hydrocarbons (GRPH) and benzene, toluene, ethylbenzene, and xylene (BTEX) compounds that were much greater than MTCA Method A cleanup levels.

In December 1998, the four USTs were decommissioned and inspected. The 12,000-gallon tank had several small holes in the side. In January 1999, the fuel dispensing pumps, pump islands, and the product piping were removed.

A remedial investigation (RI) was conducted between September and December 1999. The RI, along with earlier interim actions, included:

- The installation of 17 soil borings, 10 of these were developed into monitoring wells
- 4 UST excavations
- 10 backhoe trenches

- Soil sampling from each trench, boring, and tank excavation
- Groundwater sampling from the tank excavation and each monitoring well
- The removal of over 725 cubic yards of PCS

Due to the UST removals, building demolition, and excavation of PCS, the ground surface was mostly compacted backfill material.

During the RI, dissolved constituent groundwater contamination was discovered off-site in down-gradient wells (MW-4 and MW-6). On-site wells MW-3 and MW-7 also showed groundwater contamination, and free-phase product was observed in MW-3. This free product did not appear to be directly correlated to Priceless Gas or the Corner Express leaking UST site south across Highway 2 (CSID 7310). The free product did not have significant concentrations of methyl tertiary butyl ether (MTBE), which was identified in the petroleum from Priceless Gas. The analytical chromatographic pattern of the free product indicated signs of slight weathering and was similar, but not identical, to the pattern for the Corner Express dispenser products. The free product appears to be in a limited area near MW-3. Cottonwood Creek to the northeast of the Site had not been impacted, which was indicated in the groundwater samples collected from Well MW-10 adjacent to the creek.

Following the RI and interim cleanup actions, concerns remained regarding residual PCS being a source of groundwater contamination, potential vapor intrusion risks, and exposure through direct contact due to the lack of cover over the shallow PCS and impacted groundwater.

Cleanup actions

Interim actions and RI activities including UST removal, soil excavation, soil sampling, and groundwater monitoring well installation and sampling were completed at the Site between 1999 and 2017.

In April 2001, a feasibility study (FS) was completed that scored and ranked five cleanup action alternatives. In June 2003, a final cleanup action plan (CAP) was completed for the site. Alternative 3 was selected in the CAP and consisted of the following elements:

- Soil removal and offsite disposal
- Installation of a free product recovery sump at MW-3
- Groundwater treatment within a trench along north property boundary
- Backfilling of excavated areas with appropriate materials
- Quarterly sampling and analysis of groundwater monitoring wells
- Institutional controls

The institutional control is a restrictive covenant placed on the property deed to ensure that the potential exposure risk to contaminated soils and groundwater is known, and site activities are considerate of these potential risks. The restrictive covenant is perpetual and can only be

removed when it has been demonstrated through sampling that soil and groundwater cleanup standards have been attained.

In 2003, Merit Truck Stop, Inc. / F.O.F., Inc. notified Ecology of its limited financial resources and inability to complete the work described in the CAP. Ecology continued Site cleanup using <u>Eastern Washington Clean Sites Initiative funding</u>.⁷

In 2005, additional excavation and disposal of PCS, construction of an 80-foot treatment trench, and installation of the air sparge (AS) / soil vapor extraction (SVE) system were completed. The AS/SVE system began operating in April 2005. As funding became available, Ecology completed quarterly groundwater monitoring.

In 2005, the property was sold to Mr. Errold Sutter and is now Some Like it Hot Espresso. Mr. Sutter communicated site plans and construction schedules with Ecology. He understood the restrictive covenant and protected the integrity of the wells and equipment shed on-site during construction. The Site has been partially paved with asphalt for the constructed drive-up espresso building. Ecology did not name Mr. Sutter as a potentially liable person.

Two bioremediation amendments were applied in May and August 2015. The amendments were injected into the east and west ends of the treatment trench to stimulate biological degradation of the remaining contaminants. Bioremediation Specialists, LLC supplied Ecology's contractor GeoEngineers with 1,000 pounds of AnoxEA AQ[®] (AnoxEA) and 10 liters of ReleaSE-Gx[™] (ReleaSE). AnoxEA is a soluble, dry powder that contains electron acceptors and micronutrients and macronutrients for rapid and sustained destruction of petroleum hydrocarbons. ReleaSE is a proprietary surfactant that enhances dispersal of the AnoxEA.

Additional investigation to determine the extent of groundwater contamination at the Site continues as funding becomes available.

Groundwater monitoring

Between 2011 and 2017, GRPH concentrations in groundwater have consistently exceeded the MTCA Method A cleanup level of 800 micrograms per liter (μ g/L) in wells MW-2, MW-3, MW-4, MW-6, MW-8, and the treatment trench. MW-2 consistently has the highest dissolved-phase GRPH concentrations (between 1,620 – 36,600 μ g/L). Between 2011 and 2017, BTEX and MTBE concentrations have consistently exceeded cleanup levels in MW-1, MW-2, MW-3, MW-4, MW-6, MW-8, and the treatment trench. MW-2 and the treatment trench consistently have the highest dissolved-phase benzene concentrations (31.6 – 1,990 μ g/L and 1,400 – 3,930 μ g/L, respectively). MW-3 continues to have measurable free-phase product.

⁷ https://ecology.wa.gov/Spills-Cleanup/Contamination-cleanup/Cleanup-sites/Eastern-Washington

Cleanup standards

Cleanup standards include cleanup levels, the location where these cleanup levels must be met (point of compliance), and any other regulatory requirements that apply to the Site. <u>WAC 173-340-704</u>⁸ states MTCA Method A may be used to establish cleanup levels at sites that have few hazardous substances, are undergoing a routine cleanup action, and where numerical standards are available for all indicator hazardous substances in the media for which the Method A cleanup level is being used. Method B may be used at any site and is the most common method for setting cleanup levels when sites are contaminated with substances not listed under Method A. Method C cleanup levels may be used to set soil and air cleanup levels at industrial sites.

Ecology's 2003 CAP defined cleanup levels for soil and groundwater using MTCA Method A (WAC 173-340-740(2) and WAC 173-340-720(3)). Cleanup levels have been defined for the gasoline constituents BTEX and MTBE. Method A cleanup levels were also applied to total petroleum hydrocarbons (TPH) occurring as gasoline and diesel.

The associated cleanup levels for each contaminant are in Table 1.

Contaminant	Soil cleanup level (mg/kg)	Groundwater cleanup level (μg/L)
Benzene	0.03	5
Toluene	7	1,000
Ethylbenzene	6	700
Xylenes	9	1,000
MTBE	0.1	20
TPH - Gasoline	30	800
TPH - Diesel	2,000	500

Table 1. Cleanup levels for soil and groundwater contaminants

MTBE = methyl tertiary butyl ether μg/L = micrograms per liter mg/kg = milligrams per kilogram

TPH = total petroleum hydrocarbons

The point of compliance for meeting soil cleanup levels at this Site was selected using WAC 173-340-740(6). The point of compliance for soil is the entire vertical and horizontal extent of the Site.

⁸ https://app.leg.wa.gov/WAC/default.aspx?cite=173-340-704

The point of compliance for meeting groundwater cleanup levels at this Site was selected using WAC 173-340-720(8). The points of compliance for groundwater are wells MW-1, MW-2, MW-3, and MW-6.

Restrictive Covenant

Ecology determined that institutional controls would be required as part of the cleanup action to document the remaining contamination, protect the cleanup actions, and protect human health and the environment. On October 3, 2003, institutional controls in the form of a <u>restrictive covenant</u>⁹ (Covenant) were recorded for the Site.

The Covenant recorded for the Site imposes the following limitations:

- No groundwater may be taken for any beneficial use from the property. The owner shall not conduct any activities at the property that may result in the release of exposure to the environment of the contaminated soil or create a new pathway without prior written approval from Ecology.
- 2. Any activity on the property that may interfere with the integrity of the remedial action and continued protection of human health and the environment is prohibited.
- 3. Any activity on the property that may result in the release or exposure to the environment of a hazardous substance that remains on the property as part of the remedial action, or create a new exposure pathway, is prohibited without prior written approval from Ecology.
- 4. The owner of the property must give thirty (30) days advance written notice to Ecology of the owner's intent to convey any interest in the property. No conveyance of title, easement, lease, or other interest in the property shall be consummated by the owner without adequate and complete provision for continued monitoring, operation, and maintenance of the remedial action.
- 5. The owner must restrict leases to uses and activities consistent with the Restrictive Covenant and notify all lessees of the restrictions on the use of the property.
- 6. The owner must notify and obtain approval from Ecology prior to any use of the property that is inconsistent with the terms of this Restrictive Covenant. Ecology may approve any inconsistent use only after public notice and comment.
- 7. The owner shall allow authorized representatives of Ecology the right to enter the property at reasonable times for the purpose of evaluating the remedial action; to take samples, to inspect remedial actions conducted at the property, and to inspect records that are related to the remedial action.

⁹ https://apps.ecology.wa.gov/cleanupsearch/document/120279

8. The owner of the property reserves the right under WAC 173-340-440 to record an instrument that provides that this Restrictive Covenant shall no longer limit use of the property or be of any further force or effect. However, such an instrument may be recorded only if Ecology, after public notice and opportunity for comment, concurs.

Periodic Review

Effectiveness of completed cleanup actions

During the Site visit Ecology conducted on November 16, 2022, the espresso building and asphalt cover continue to eliminate exposure to contaminated soils by ingestion and contact. The asphalt appears in satisfactory condition and no repair, maintenance, or contingency actions have been required. The Site is still operating as an espresso stand. A photo log is in Appendix C.

Soils with TPH concentrations higher than MTCA Method A cleanup levels are still present at the Site. However, the current use of the Site prevents human exposure to this contamination by ingestion and direct contact with soils. The Covenant for the property will ensure that the contamination remaining is contained and controlled.

Direct contact

The cleanup actions were intended to eliminate exposure to contaminated soil and groundwater at the Site. Exposure pathways to contaminated soils by ingestion and direct contact were reduced by the asphalt cover. The cover appears to be in satisfactory condition, and no repair, maintenance, or contingency actions are required at this time.

Protection of groundwater

Soils and groundwater with TPH at concentrations exceeding MTCA Method A cleanup levels remain at the Site; however, most of the contaminated soil source material has been removed. Further assessment of the site is required to determine the extent of groundwater contamination and the free-product source area. Assessment efforts are being evaluated by the Department of Ecology.

Institutional controls

Institutional controls in the form of a Covenant were implemented at the Site in 2003. The Covenant remains active and discoverable through Lincoln County records. Ecology found no evidence a new instrument has been recorded that limits the effectiveness or applicability of the Covenant. This Covenant prohibits activities that will result in the release of contaminants contained as part of the cleanup action without Ecology's approval and prohibits any use of the property that is inconsistent with the Covenant. This Covenant ensures the long-term integrity of the cleanup action will be protected.

New scientific information for individual hazardous substances or mixtures present at the Site

There is no new relevant scientific information for the hazardous substances remaining at the Site.

New applicable state and federal laws for hazardous substances present at the Site

There are no new applicable or relevant state or federal laws for hazardous substances remaining at the Site.

Current and projected Site and resource uses

The Site is used for commercial purposes. There have been no changes in current or projected future Site or resource uses. The current Site use is not likely to have a negative impact on the protectiveness of the cleanup action.

Availability and practicability of more permanent remedies

The remedy implemented included containing hazardous substances, and it continues to be protective of human health and the environment. While more permanent remedies may be available, they are still not practicable at this Site.

Availability of improved analytical techniques to evaluate compliance with cleanup levels

The analytical methods used at the time of the cleanup action were capable of detection below the selected MTCA cleanup levels. The presence of improved analytical techniques would not affect decisions or recommendations made for the Site.

Conclusions

- The cleanup actions completed at the Site appear to be protective of human health and the environment.
- Soil cleanup levels have not been met at the Site; however, the cleanup action is determined to comply with cleanup standards under WAC 173-340-740(6)(f), since the long-term integrity of the containment system is ensured and the requirements for containment technologies have been met.
- Groundwater compliance monitoring at the Site indicates contaminants of concern exceed MTCA A cleanup levels.

• The Covenant for the property is in place and is effective in protecting human health and the environment from exposure to hazardous substances and the integrity of the cleanup action.

Based on this periodic review, Ecology has determined the requirements of the Covenant are being followed. No additional cleanup actions are required by the property owner at this time. The property owner is responsible for continuing to inspect the Site to assure the integrity of the cleanup action is maintained.

Next review

Ecology will schedule the next review for the Site five years from the date of this periodic review. If additional cleanup actions or institutional controls are required, the next periodic review will be scheduled five years after those activities are completed.

References

Ecology. Restrictive Covenant. September 29, 2003.

Ecology. Periodic Review. January 2016.

Ecology. Site Visit. November 16, 2022.

GeoEngineers. *Monitoring Well Installation and Second Quarter2017 Groundwater Sampling Report*. August 25, 2017.

Pachergnegg. *Prices-Less Gas Remedial Investigation and Feasibility Study (RI/FS) Supplemental Report*. April 9, 2001.

Appendix A. Vicinity Map



Appendix B. Site Plan



Appendix C. Photo Log

Photo 1: Espresso stand at the Site – from the south



Photo 2: Espresso stand and SVE/AS shed — from the northeast



Photo 3: Espresso stand — from the southwest



Photo 4: Espresso Stand – from the east

